Rule CIC251 Default value was specified for the MROBTCH keyword

Finding: CPExpert noticed that the default value for MROBTCH was specified in the System Initialization Table (SIT).

Impact: This finding should normally have a LOW IMPACT or MEDIUM IMPACT on the performance of the CICS region. Additionally, benchmarks by IBM have shown about 12% decrease in processor overhead resulting from batching MRO requests.

Logic flow: This is a basic finding, based upon an analysis of the daily CICS statistics.

Discussion: CICS regions which use Multiple Region Operation (MRO) can queue MRO requests rather than sending the requests to the other region as the requests arrive. This queueing, or batching, of the MRO requests saves the overhead of posting and dispatching the region for each request.

Batching of MRO requests is accomplished using the MROBTCH parameter in the SIT. The MROBTCH parameter specifies the number of MRO requests which are to be accumulated before providing the set of requests to the receiving region. When the number of requests specified by the MROBTCH parameter has been accumulated, or when the time specified by the ICV parameter has lapsed, the region is started to process the requests.

With CICS Version 2, batching of MRO requests applied only to MRO requests. With CICS/ESA Version 3, batching of the requests was extended to include some non-MRO events, such as:

- VSAM physical I/O completion
- Subtasked request completion (if SUBTSKS=1 is specified)
- DL/I request completion implemented through DBCTL

Benchmarks executed by IBM have shown a significant (20%-30%) improvement in Internal Throughput Rate and about 12% decrease in processor utilization when using MROBTCH=6 and using MROLRM=YES, versus a base system with MROBTCH=1 and MROLRM=NO.

The base system values represent the defaults which IBM supplies with the SIT, for CICS Version 2 and Version 3. However, the IBM *CICS Performance Guides* recommend that the defaults be changed.

Suggestion: CPExpert suggests that you consider changing the MROBTCH value in the SIT from the default of MROBTCH=1 to MROBTCH=6.

CPExpert also suggests that you specify ISV=500 when you implement MRO batching, and that you specify MROLRM=YES. Please see Rule CIC250 and Rule CIC253 for discussion about this suggestion.

Reference: *CICS/MVS Version 2.1.2 Performance Guide*: pages 142-145, 215, 297-299, and 472-473. (Note that the referenced benchmark results are reported on pages 472-473.)

CICS/ESA Version 3.1.1 Performance Guide: pages 219-220, 278-280, and 329-331.

CICS/ESA Version 3.2.1 Performance Guide: pages 118-121, 136-139, and 222-223.

CICS/ESA Version 3.3.1 Performance Guide: pages 129-131, 146-149, and 240-241.

CICS/ESA Version 4.1.1 Performance Guide:Section 4.2.8, Section 4.3.8, and Section 4.8.4.

CICS/TS Release 1.1 Performance Guide: Section 4.2.8, Section 4.3.8, and Section 4.8.4.

CICS/TS Release 1.2 Performance Guide: Section 4.2.8 and Section 4.8.5.

CICS/TS Release 1.3 Performance Guide: Section 4.12.5.

CICS/TS for z/OS Release 2.1 *Performance Guide*: Chapter 24 (MRO and ISC - Batching requests (MROBTCH)).

CICS/TS for z/OS Release 2.2 *Performance Guide*: Section 4.11.5 (Batching requests).

